

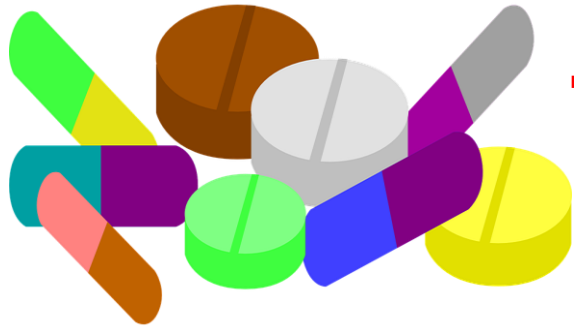


มหาวิทยาลัยราชภัฏนครปฐม
Nakhon Pathom Rajabhat University

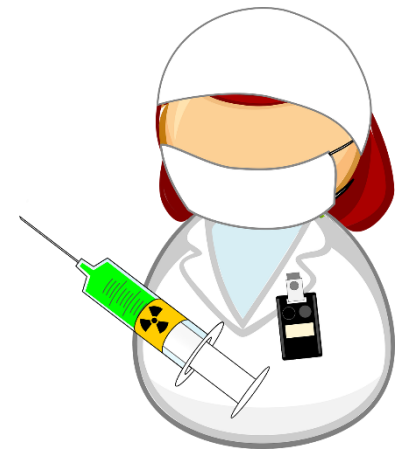


Unit VI

Rational Drug Use



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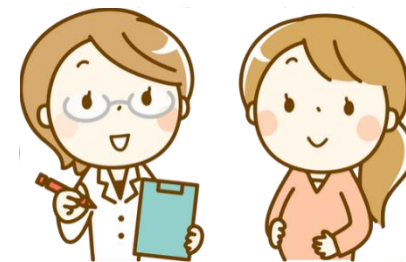


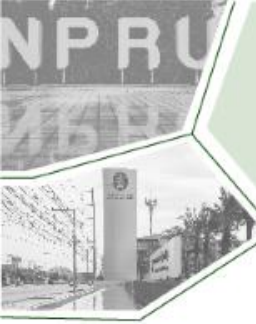
LEARNING OBJECTIVES OF THE TOPIC



After studying this topic, the students will be able to

- Describe the definition of rational drug use.
- Describe the framework of rational drug use.
- Identify the good prescribing practice for rational drug use in primary medical care context.



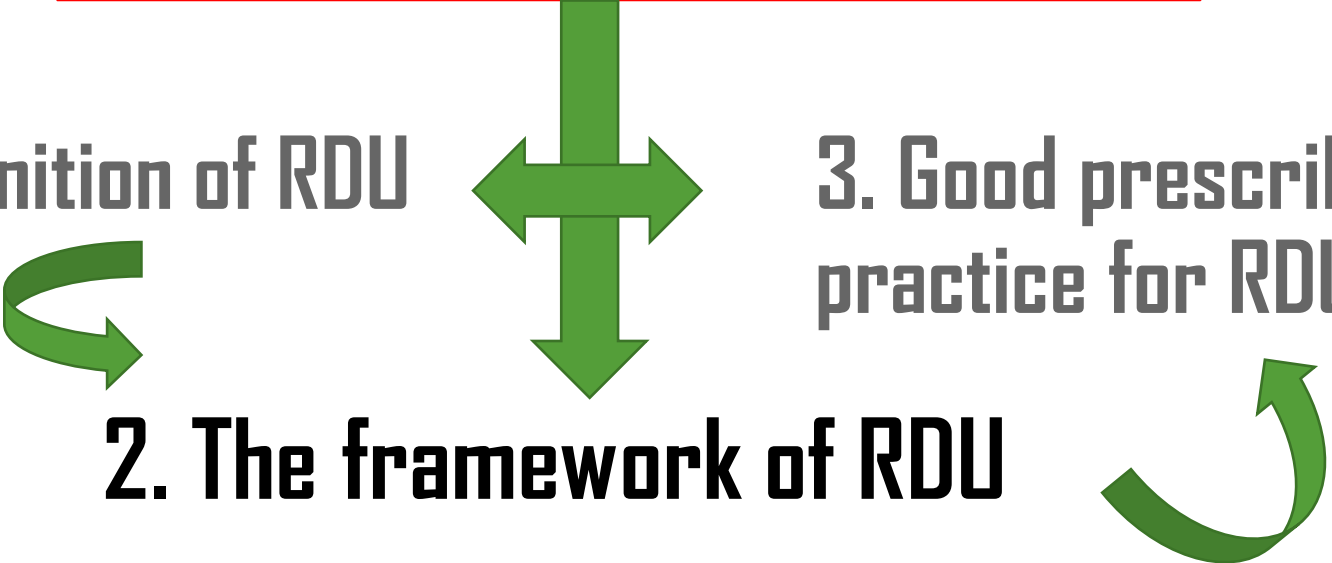


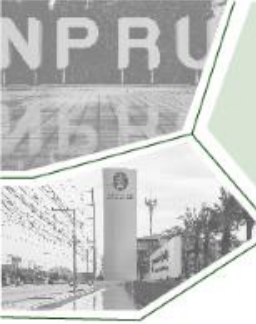
SCOPE OF TOPIC

1. Definition of RDU

3. Good prescribing practice for RDU

2. The framework of RDU





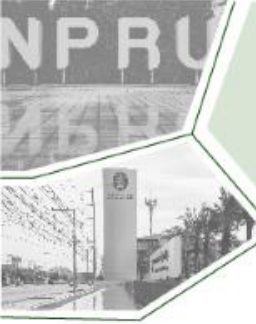
1. The definition of rational drug use (RDU):

Rational drug use or Rational use of medicines

"Patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community."

(WHO, 1985 available from
https://www.who.int/medicines/areas/rational_use/en/)





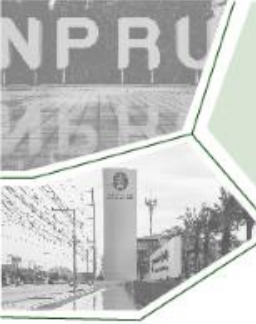
2. The framework of RDU

- The framework of RDU: indication, efficacy, risk, cost, other considerations, dose, method of administration, dosing frequency, duration of treatment, and patient compliance.

2.1 Indication

Take medication when needed (more beneficial than penalty)





2. The framework of RDU

2.2 Efficacy

The drug is really useful to people.

There is sufficient supporting evidence.

The benefits differ from placebo and have a clinical significance.

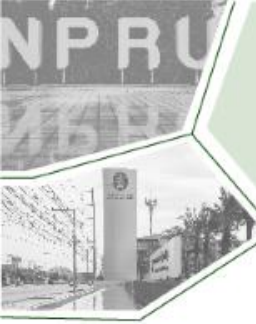
2.3 Risk

Consider the main safety of the patients

2.4 Cost

Use sufficient and worthwhile medication





2. The framework of RDU

2.5 Other considerations

Knowledgeable, careful, responsible and use drugs in accordance with the academic standards.

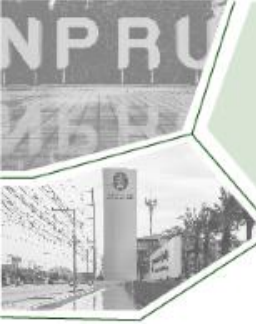
2.6 Dose

Use the right dose, not too small nor too much, don't adjust the medication by yourself.

2.7 Method of administration

Take the medicine correctly.





2. The framework of RDU

2.8 Dosing frequency

Take the medicine at the right frequency

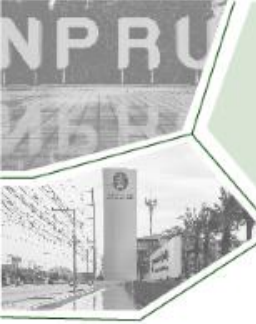
2.9 Duration of treatment

Take medication during the appropriate treatment period. Not too short nor long period

2.10 Patient compliance

Taking of medication with regards to patient's convenience and acceptance





3. Good prescribing practice for RDU:

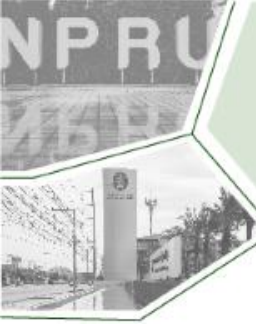
3.1 Antihistamine

Antihistamines can be divided into 2 groups:

3.1.1 non-sedating antihistamine (Low-dose antihistamines), also known as the second (or newer) generation antihistamine (Second-generation anti-histamine drugs)

- Examples of drugs in this group are cetirizine (a) loratadine (a) desloratadine (am) fexofenadine (am) and levocetirizine (am) etc.
- Examples of trade names of drugs in this group are Zyrtec® , Clarityne® , Aerius® , Telfast® , and Xygal® , etc.





Good prescribing practice for RDU:

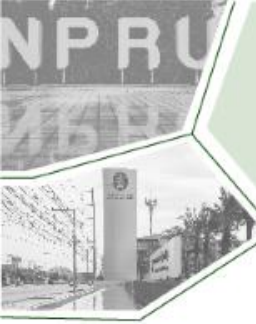
3.1 Antihistamine

3.1.2 Sedating antihistamine (Sleepy antihistamine drugs), also known as the first generation antihistamine

- Example of drugs in this group are:
 - Brompheniramine maleate (ก) - Chlorpheniramine maleate * (ก)
 - Diphenhydramine hydrochloride (ก) - Dimenhydrinate (ก)
 - Triprolidine (ข) and Aebhydrolin (ข) etc.

Note * Currently, the new name is called Chlorphenamine





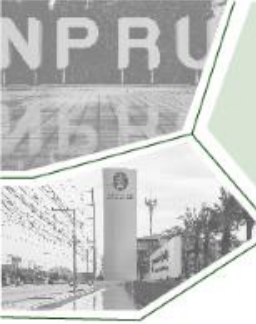
Good prescribing practice for RDU:



3.1 Antihistamine

- The first-generation anti-histamine drugs may be used to alleviate a runny nose for colds to some patients in some cases. But not for children under 6 years of age, especially infants younger than 1 year because it can be very dangerous.
- Be careful when using first-generation anti-histamine drugs with
 - while driving vehicles or work at risk for an enlarged prostate.
 - Epilepsy, - Glaucoma, - HT or cardiovascular disease.
 - Bronchitis and, asthma, - Impaired liver or kidney function.





Good prescribing practice for RDU:

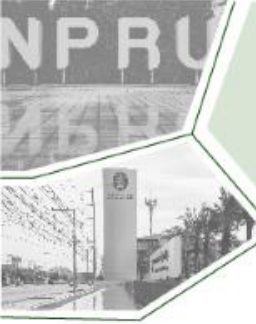


3.1 Antihistamine

- Both antihistamines are registered use in allergic diseases such as allergic rhinitis, urticaria and etc.

- The conclusion is not to use non-sedating antihistamine in order to relief colds since there is no effectiveness in both children and adults.
- The general use of drug is unreasonable.



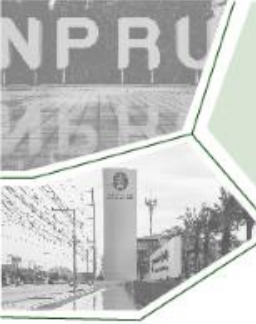


Good prescribing practice for RDU:

3.2 Domperidone (ก)₁

- Indication of dosage and duration of medication to reduce the risk of heart failure as follows:
 - 1) Used to relieve **nausea and vomiting** in a short period of **no more than 7 days**.
 - 2) **Cancel** other indications of medication such as **relief of dyspepsia and GERD**
 - 3) Use in adults **no more than 10 milligrams per time (1 tablet)**
no more than 3 times a day (Max. 1x3 oral ac)
 - Use In children, a dose of 0.25 mg / kg at a time not more than 3 times a day should be taken on an empty stomach.





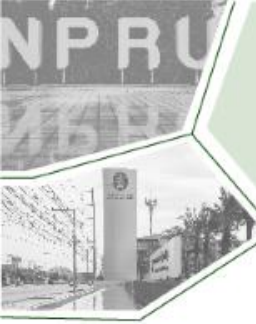
Good prescribing practice for RDU:

3.2 Domperidone (ก)₂



- 5) Do not use domperidone with people who have blood abnormalities in mineral potassium or prolonged QT, low magnesium in the blood, high potassium in the blood since there is a higher risk of prolonging QTc.
- 6) Do not use domperidone to people with heart disease such as existing heart failure or bradycardia.
- 7) Do not use domperidone with moderate to severe impaired liver function.
- 8) Domperidone should not be used regularly to stimulate breast milk. When in use, it should not exceed the size specified above, should only be used for the shortest duration and should not be used during the first week after birth.





Good prescribing practice for RDU:

3.3 Paracetamol (ก)

Used mainly with regard to effectiveness and safety for the liver.

-Take the dose at 10-15 mg / kg / time in both children and adults, calculated according to the ideal body weight.

In the case of child or adult obesity, take paracetamol tablets (500 mg)

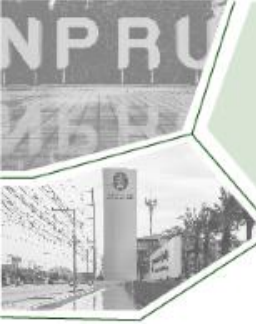
- People who are underweight (such as 50 kilograms) should not receive 2 pills at a time because they will have an overdose.

▪ **The right dosage is 1 tablet or 1 and a half tablets**

- People who are overweight (such as 67 kilograms) should not receive 1 tablet at a time because they will have an underdose.

- ▪ **Suitable dosage is 2 tablets at a time-**





Good prescribing practice for RDU:

3.3 Paracetamol (ก)



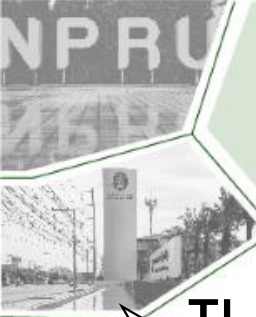
In the case of child or adult obesity take paracetamol tablets (500 mg)

- No more than 4,000 milligrams per day
- Paracetamol should not be used more than 2,000 milligrams per day for long-term use in adults, such as osteoarthritis.
- Avoid using paracetamol in combination with alcohol to prevent liver aggravation and may be toxic to the kidneys, even in small amounts.

In the case of child or adult obesity take paracetamol tablets (325 mg)

- No more than 3250 milligrams per day (no more than 10 tablets per day)

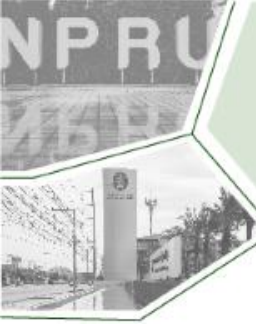




TOPIC SUMMARY

- The rational use of medicine is an essential indicator that reflects the quality of health services. So that a medicine and practitioner should be used appropriately with regards to its proven benefits, the lesser risk and at its lowest cost for them and their community.
- The rational use of drugs require patients to receive medications appropriate to their clinical needs, in doses that meets their own individual requirements at an adequate period of time for the patient..





Thank You!

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